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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/698,278

10/31/2003

Timothy L. Hillstrom

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06/07/2005

AGILENT TECHNOLOGIES, INC.

Legal Department, DL429

Intellectual Property Administration

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EXAMINER

TSAI, CAROL S W

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/698,278

Applicant(s)

HILLSTROM, TIMOTHY L.

Examiner

Carol S. Tsai

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 April 2005.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-15 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### *Claim Rejections - 35 USC § 101*

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims 1-15 recite no clearly defined practical application of the claimed method or do not draw a conclusion as to the final end result of configuring of a vector network analyzer (VNA) being directed toward a practical application. The examiner submits that the claimed method merely manipulates an abstract idea without limitation to a practical application.

Claim 1 recites signal analysis that is not tied to any physical structure for configuring said VNA and identifying discontinuities correlated to a VSWR lobe. The Examiner submits that the claimed method consists solely of the manipulation of an abstract idea is not concrete or tangible.

#### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 4,630,228 to Tarczy-Hornoch et al. in view of U. S. Patent No. 6,437,578 to Gumm.

Tarczy-Hornoch et al. disclose a method of using a transmission line analyzer for coordinated Voltage Standing-Wave Ratio (VSWR) and Time Domain Reflectometry (TDR) measurement, said method comprising configuring said transmission line analyzer for identifying discontinuities correlated to a Voltage Standing-Wave Ratio (VSWR) lobe (see col. 1, line 62 to col. 2, line 2; col. 2, 39 to col. 3, line 61).

Tarczy-Hornoch et al. do not disclose a vector network analyzer (VNA).

Gumm teaches a vector network analyzer (VNA) (see Abstract, lines 10-12).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tarczy-Hornoch et al.'s method to include a vector network analyzer (VNA), as taught by Gumm, in order that amplitude and phase of the network's transmission coefficient or reflection coefficient of the device under test for a plurality of test signal frequencies can be measured.

#### *Allowable Subject Matter*

5. Claims 2-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Response to Arguments*

6. Applicant's arguments filed April 27, 2005 have been fully considered but they are not persuasive.

Applicant argue that claims 1-15 recite at least a useful process by using a vector network analyzer (VNA) for coordinated Voltage Standing-Wave Ratio (VSWR) and Time Domain Reflectometry (TDR) measurement, and that claim 1 also comprises a limitation that suggests a use for such a process – “configuring said VNA for identifying discontinuities correlated to a VSWR lobe”. The Examiner disagrees with Applicant. As indicated above by the Applicant that configuring said VNA is for identifying discontinuities correlated to a VSWR lobe; however, Applicant does not draw a conclusion as to the final end result of identifying discontinuities correlated to a VSWR lobe. As set forth above, the claims 1-15 recite no clearly defined practical application of the claimed method or do not draw a conclusion as to the final end result of configuring of a vector network analyzer (VNA) being directed toward a practical application. The examiner submits that the claimed method merely manipulates an abstract idea without limitation to a practical application.

Applicant argues that Tarczy-Hornoch et al. do not disclose identifying discontinuities correlated to a Voltage Standing-Wave Ratio (VSWR) lobe. The Examiner disagrees with Applicant. As set forth above in the art rejection, Tarczy-Hornoch et al. disclose a method of using a transmission line analyzer for coordinated Voltage Standing-Wave Ratio (VSWR) and Time Domain Reflectometry (TDR) measurement, said method comprising configuring said transmission line analyzer for identifying discontinuities correlated to a Voltage Standing-Wave Ratio (VSWR) lobe (see col. 1, line 62 to col. 2, line 2; col. 2, 39 to col. 3, line 61). Tarczy-

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Hornoch et al. do not disclose a vector network analyzer (VNA). Gumm teaches a vector network analyzer (VNA) (see Abstract, lines 10-12) in order that amplitude and phase of the network's transmission coefficient or reflection coefficient of the device under test for a plurality of test signal frequencies can be measured. Therefore, the combination of Tarczy-Hornoch et al. and Gumm clearly teach claimed invention.

### *Conclusion*

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### *Contact Information*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. W. Tsai whose telephone number is (571) 272-2224. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571) 272-2216. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).



Carol S. W. Tsai  
Primary Examiner  
Art Unit 2857

cswt  
June 01, 2005